

barometric gradient, behaved in similar manner. High pressure dominated conditions at most other times. Due to these conditions, the weather was abnormally dry in the eastern and central portions of the district, with much greater fire hazard than usual and much accumulation of smoke from numerous grass and small forest fires.

A moderate Gulf disturbance caused maximum wind velocities of 30 and 24 miles an hour from the east at Burrwood and New Orleans, respectively, early in the afternoon of the 12th. As the disturbance moved westward some distance off the shore the effects at other land stations in the district was less marked. Northeast storm warnings were ordered by the Washington office westward to Burrwood in the morning of the 12th, for the remainder of the Louisiana coast at night on the 12th, and for the middle and west coasts of Texas on the morning of the 13th. Small craft warnings were displayed at West End, on Lake Pontchartrain on the 12th, from 10 a. m. until night, and were justified. Small craft warnings were displayed also by the official in charge at Corpus Christi, Tex., on the 30th.

After a slow-moving tropical storm had passed eastward over southern Florida on the 21st, the conditions in the Gulf States remained under the influence of a large, sluggish area of high pressure for about a week, with daily frosts in most interior sections. These frosts were generally forecast. Frost warnings issued earlier in the month on the 5th and 8th for the extreme northwestern portion of the district were not justified, owing to cloudiness or insufficient cooling.

Fire-weather warnings were issued for forest areas in Oklahoma on the 8th, 11th, and 29th and in Arkansas on the 8th, 29th, and 30th, and conditions occurred as forecast.—*R. A. Dyke.*

DENVER FORECAST DISTRICT

Frequent precipitation in Colorado during the first two decades of the month, and occasional rains in the remainder of the district, resulted from a succession of storms that advanced eastward from the southern Plateau region. Heavy rains fell in northern Arizona on the 7th and heavy snows occurred in the mountains of Colorado on the 8th. After the 20th the important storms passed to the northward of the district and generally fair weather prevailed until the 29th, when snow or rain in Utah and Colorado attended a storm of decided intensity that moved southeastward from the north Pacific coast.

Special warnings were issued as follows: 2d, frost in northern New Mexico, heavy frost in Colorado and Utah, with freezing temperatures at the higher elevations of Colorado, Arizona, and Utah; 3d, frost in northern New Mexico; 4th, frost in Colorado, northern New Mexico, and Utah, with freezing temperature at the higher elevations of Colorado and Utah; 8th, frost in Colorado, northern and eastern New Mexico, and freezing temperature in southwestern Colorado; 11th, frost in Colorado, northern and western New Mexico, and northwestern Utah, with freezing temperature in western Colorado, extreme northwestern New Mexico, and eastern Utah; 12th, frost in southern New Mexico, freezing temperature in western Colorado, northern New Mexico, and southern and eastern Utah; 13th, frost in northwestern Colorado, freezing temperature in southern and eastern Colorado; 18th, frost in northern Colorado; 30th, frost

in southern New Mexico, south-central and southeastern Arizona, freezing temperature in Colorado and northern New Mexico; 31st, frost in south-central and south-western New Mexico.

Warnings of freezing temperature in the valleys of western Colorado were issued on the 18th, 19th, 20th, 22d, 26th, 27th, 28th, and 30th. All frosts and freezing temperature warnings were generally [i. e., over most of the areas for which they were forecast] verified.

Fire-weather warnings, containing forecasts of strong winds in northern and western New Mexico, northern Arizona, and Utah were issued on the morning of the 29th to the district foresters at Albuquerque, N. Mex., and Ogden, Utah. Strong winds prevailed in the territory specified on the 29th and in Colorado on the 30th.—*J. M. Sherier.*

SAN FRANCISCO FORECAST DISTRICT

The month of October, 1924, opened in this district with a moderate storm passing eastward through British Columbia, which gave rain over the northern portion of the district during the first three days of the month. On the afternoon of the 4th a small depression moved inland through northern California and caused rain in California and Nevada on the 5th and 6th. On the 6th a moderate storm moved inland in the vicinity of Juneau and gave rain in the North Pacific States from the 7th to the 9th and in the northern Plateau on the 9th and 10th. On the 11th a storm appeared off Sitka and moved southeastward along the coast, giving rain in the western portions of Washington and Oregon from the 12th to the 15th, when it passed southeastward through the North Pacific States and central Plateau and caused rain on the 15th and 16th in northern California. On the 20th a large storm of marked energy appeared in the Gulf of Alaska, moving slowly southeast, and remained off the northern coast during the remainder of the month. It gave rain in the North Pacific States and on the extreme northwest California coast from the 23d to the end of the month, in northern California from the 26th to the 29th, and in Nevada and Idaho on the 28th and 29th.

The rain in the first decade practically ended all danger from forest fires for this season, which was one of the driest and worst for forest fires on record.

Storm warnings were displayed on the Washington and Oregon and Puget Sound on the 2d, 11th, 13th, 14th, 15th, 20th, 26th, and 28th to 31st; and on the northern California coast on the 14th, 15th, 20th, 26th, and 28th to 31st. The warnings were generally timely and verified. Very rough and stormy weather prevailed in the north Pacific during the third decade and one coast steamer was wrecked and several disabled. The *Acme* was wrecked near Bandon, Oreg.; the *Saginaw* and the *Trinidad* were disabled and towed to Astoria, and the *Yellowstone* lost a deckload of lumber and a mast but was able to make port at Eureka and the *Ocean Queen* was disabled off the Golden Gate and towed into San Francisco. No loss of life was reported.

Special forecasts were made for the dirigible airship *Shenandoah* during a flight from San Diego to Seattle and return. The forecasts were highly commended by the officer in charge. The flight was made during a lull between two storms, and it is believed that the advices given were in a great measure responsible for the successful voyage.—*G. H. Willson.*